

Claims

We claim:

- 1 1. A method for the collection and analysis of computer system
2 capacity data in a partition which determines a sizing metric
3 comprising the steps of:
 - 4 a) obtaining throughput information of a computer system
5 first partition;
 - 6 b) obtaining resource utilization information of the
7 computer system first partition;
 - 8 c) calculating a resource control parameter using the
9 information obtained; and
 - 10 d) using the resource control parameter to indicate resource
11 allocation.
- 1 2. The method according to claim 1 wherein the resource
2 utilization is CPU utilization.
- 1 3. The method according to claim 1 wherein the throughput
2 information is displayed at a terminal as a function of resource
3 utilization.
- 1 4. The method according to claim 1 comprising the further step
2 of displaying inter-interval weighted averages as a function of
3 resource utilization.
- 1 5. The method according to claim 1 wherein shifted throughput
2 information is displayed at a terminal as a function of resource
3 utilization.

1 6. The method according to claim 1 wherein the resource control
2 parameter is displayed at a terminal as change in throughput
3 divided by the change in resource utilization verses resource
4 utilization.

1 7. The method according to claim 6 wherein the display of
2 effective utilization is marked at the utilization at which the
3 resource control parameter is half of its maximum.

1 8. The method according to claim 1 comprising the further step of
2 using the effective utilization to manage the workload of the
3 first partition.

1 9. The method according to claim 8 wherein the using step is
2 performed by a workload manager.

1 10. The method according to claim 9 wherein the workload manager
2 is in a second partition.

1 11. The method according to claim 1 comprising the further step
2 of providing the throughput information and the resource
3 utilization information for the calculating step by way of a
4 shared memory.

1 12. The method according to claim 1 comprising the further step
2 of providing the throughput information and the resource
3 utilization information for the calculating step using a single
4 operation memory to memory transfer function.

1 13. The method according to claim 8 wherein the workload is
2 managed by modifying the resources allocated to the first
3 partition.

1 14. The method according to claim 13 wherein the resources
2 include I/O.

1 15. The method according to claim 13 wherein the resources
2 include memory.

1 16. A method according to claim 13 wherein the resources include
2 processors.

1 17. A method according to claim 8 wherein the workload is managed
2 dynamically.

1 18. A method according to claim 1 wherein the throughput
2 information is network packet counts.

1 19. A method according to claim 1 wherein inverse throughput is
2 the throughput information.

1 20. A system for the collection and analysis of computer system
2 capacity data in a partition which determines a sizing metric
3 comprising:

1 a) means for obtaining throughput information of a computer
2 system first partition;

3 b) means for obtaining resource utilization information of
4 the computer system first partition;

5 c) means for calculating a resource control parameter using
6 the information obtained; and

7 d) means for using the resource control parameter to
8 indicate resource allocation.

1 21. The system according to claim 20 wherein the resource
2 utilization is CPU utilization.

1 22. The system according to claim 20 wherein the throughput
2 information is displayed at a terminal as a function of resource
3 utilization.

1 23. The system according to claim 20 further comprising means
2 for displaying inter-interval weighted averages as a function of
3 resource utilization.

1 24. The system according to claim 20 wherein shifted throughput
2 information is displayed at a terminal as a function of resource
3 utilization.

1 25. The system according to claim 20 wherein the resource control
2 parameter is displayed at a terminal as change in throughput
3 divided by the change in resource utilization verses resource
4 utilization.

1 26. The system according to claim 25 wherein the display of
2 effective utilization is marked at the utilization at which the
3 resource control parameter is half of its maximum.

1 27. The system according to claim 20 further comprising means for
2 using the effective utilization to manage the workload of the
3 first partition.

1 28. The system according to claim 27 wherein the using means is a
2 workload manager.

1 29. The system according to claim 28 wherein the workload
2 manager is in a second partition.

1 30. The system according to claim 20 further comprising means
2 for providing the throughput information and the resource
3 utilization information for the calculating step by way of a
4 shared memory.

1 31. The system according to claim 20 further comprising means
2 for providing the throughput information and the resource
3 utilization information for the calculating means using a single
4 operation memory to memory transfer function.

1 32. The system according to claim 27 wherein the workload is
2 managed by modifying the resources allocated to the first
3 partition.

1 33. The system according to claim 32 wherein the resources
2 include I/O.

1 34. The system according to claim 32 wherein the resources
2 include memory.

1 35. A system according to claim 32 wherein the resources include
2 processors.

1 36. A system according to claim 20 wherein the workload is
2 managed dynamically.

1 37. A system according to claim 32 wherein the throughput
2 information is network packet counts.

1 38. A system according to claim 20 wherein inverse throughput is
2 the throughput information.

1 44. The computer program product according to claim 39 wherein
2 the resource control parameter is displayed at a terminal as
3 change in throughput divided by the change in resource
4 utilization verses resource utilization.

1 45. The computer program product according to claim 44 wherein
2 the display of effective utilization is marked at the utilization
3 at which the resource control parameter is half of its maximum.

1 46. The computer program product according to claim 39 further
2 comprising computer readable program means for using the
3 effective utilization to manage the workload of the first
4 partition.

1 47. The computer program product according to claim 46 wherein
2 the using means is a workload manager.

1 48. The computer program product according to claim 47 wherein
2 the workload manager is in a second partition.

1 49. The computer program product according to claim 39 further
2 comprising computer readable program means for providing the
3 throughput information and the resource utilization information
4 for the calculating step by way of a shared memory.

1 50. The computer program product according to claim 39 further
2 comprising computer readable program means for providing the
3 throughput information and the resource utilization information
4 for the calculating means using a single operation memory to
5 memory transfer function.

1 51. The computer program product according to claim 46 wherein
2 the workload is managed by modifying the resources allocated to
3 the first partition.

1 52. The computer program product according to claim 51 wherein
2 the resources include I/O.

1 53. The computer program product according to claim 51 wherein
2 the resources include memory.

1 54. The computer program product according to claim 51 wherein
2 the resources include processors.

1 55. The computer program product according to claim 46 wherein
2 the workload is managed dynamically.

1 56. The computer program product according to claim 39 wherein
2 the throughput information is network packet counts.

1 57. The computer program product according to claim 39 wherein
2 inverse throughput is the throughput information.

1 58. A system for the collection and analysis of computer system
2 capacity data in a partition which determines a sizing metric
3 comprising:

4 a manager in the computer system, said manager operable to
5 issue a command to obtain throughput information of a computer
6 system first partition;

7 said manager further operable to issue a command to obtain
8 resource utilization information of the computer system first
9 partition;

10 said manager further operable to calculate a resource
11 control parameter using the information obtained; and

12 a monitor connected to said manager, said monitor indicating
resource allocation responsive to said resource control.